

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,154	09/21/2001	Peter Kurze	45503-00011	6323

7590 12/10/2003

Thomas R Boland
Vorys Sater Seymour and Pease
1828 L Street NW 11th Floor
Washington, DC 20036

EXAMINER

OLTMANS, ANDREW L

ART UNIT	PAPER NUMBER
----------	--------------

1742

DATE MAILED: 12/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-2

Office Action Summary

Application No.

09/937,154

Applicant(s)

KURZE ET AL.

Examiner

Andrew L Oltmans

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 11-19 is/are rejected.
- 7) ☒ Claim(s) 7-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Fruchtnicht 3,620,939

2. Claims 11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Fruchtnicht 3,620,939 (Fruchtnicht).

Fruchtnicht teaches a method of passivating (i.e. creating a chemical conversion coating on) magnesium surfaces and the resultant magnesium article (abstract) wherein the method includes contacting the surface of magnesium with a solution that includes ammonium vanadate and potassium permanganate, as recited in claim 11 (col 2, lines 60-73). Fruchtnicht teaches that the contact is at ambient temperature, which is encompassed by the range of temperatures recited in claim 13 (col 3, lines 18-19). The claims do not distinguish over the teachings of Fruchtnicht.

With respect to the language “electroless” appearing prior to “conversion coating” in the claims (e.g. claim 11), the use of the term does NOT limit the claims to method steps free of an external current source. The method steps recited (see e.g. claim 11, line 1), the process steps do not include the “electroless” language in the context of the process steps. The recitation “electroless” has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose

Art Unit: 1742

of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Therefore, the method steps are not limited to a process free of an external current. As currently drafted, the mere labeling of the conversion coating as "electroless" in the preamble is insufficient to distinguish the article, or limit the process steps to a process free of an external current.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Fruchtnicht 3,620,939

4. Claims 1-2, 12 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fruchtnicht 3,620,939 (Fruchtnicht).

Fruchtnicht teaches as set forth in paragraph 3, above. Fruchtnicht further teaches that the time of contact overlaps the time of contact claimed in instant claim 14 (col 5, line 15).

Fruchtnicht also teaches compositions that overlap the compositions instantly claimed in instant claims 15 and 16 (col 3, lines 64-67).

Art Unit: 1742

Fruchtnicht fails to meet all the limitations of the instant claims in that Fruchtnicht does not explicitly teach the oxide content of the resultant coating, the pH or the exact ranges of composition or contact time.

However, with respect to the oxide content of the resultant coating (instant claim 1), one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the process steps taught by the reference are the same as the process steps recited in the claims (i.e. contacting the surface of magnesium with a solution including permanganate and vanadate (Fruchtnicht: col 3, lines 60-74)) and therefore one of ordinary skill in the art would expect that the products resulting from the process taught by the reference would be the same as the product resulting from applicant's claimed process, including the product's oxide content.

"Where the claimed and prior art products are identical or substantially identical in structure or composition or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best 195 USPQ 430, 433 (CCPA 1977)." see MPEP 2112.01. [emphasis added by examiner]

With respect to the pH concentration of the treatment solution (instant claim 12), one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the composition taught by the reference is substantially identical to the composition recited in the claims and therefore one of ordinary skill in the art would expect that the product taught by the reference would be the same as applicant's claimed product, including the product's pH, see MPEP 2112.01.

With respect to the composition and the time of contact, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious

Art Unit: 1742

because the composition and time of contact taught by the reference overlap that of the instant claims, In re Malagari, 182 USPQ 549, and MPEP 2144.05.

With respect to the process steps recited in claim 2, it is noted that the process steps do not distinguish over any process utilized to create the claimed conversion coating because the claim uses the language “prepared by” (claim 2, line 3). The use of the phrase “prepared by” in the article claim indicates a product-by-process claim. It is well settled that a product-by-process claim defines a product, and that when the prior art discloses a product substantially the same as that being claimed, differing only in the manner by which it is made, the burden falls upon the applicant to show that any process steps associated therewith results in a product materially different from that disclosed in the prior art. See In re Thorpe, (227 USPQ 964), In re Brown, (173 USPQ 685), In re Fessman, (180 USPQ 524) and MPEP 2113. In this case, the article taught by Fruchnicht is substantially the same as the product instantly claimed.

With respect to the language “electroless” appearing prior to “conversion coating” in the claims (e.g. claims 1 and 2), the use of the term does NOT limit the claims to method steps free of an external current source. In claim 1 and 2, the claim is drawn to an article. The use of the term “electroless” only appears in front of the term “conversion coating” in an attempt to claim the method in which the conversion coating is made. The process steps do not limit the article for the reasons set forth above in the explanation of the product-by-process claims. Further, even in the method steps recited (see e.g. claim 2, lines 3-5), the process steps do not include the “electroless” language in the context of the process steps. Therefore, the method steps are not limited to a process free of an external current (note the product-by-process discussion above).

Art Unit: 1742

As currently drafted, the mere labeling of the conversion coating as "electroless" is insufficient to distinguish the article, or limit the process steps to a process free of an external current.

Japanese Patent JP 08-035073 Takatani Matsufumi in view of Pacz 1,723,067

NOTE: All references to the JP '073 reference are to the abstract or the English Language translation provided, unless otherwise indicated.

5. Claims 1-2 and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent JP 08-035073 Takatani Matsufumi (JP '073) in view of Pacz 1,723,067 (Pacz).

JP '073 teaches a method of forming a conversion coating (i.e. passivating) on the surface of magnesium and the resultant article, as recited in instant claim 1-2 and 11 (abstract). JP '073 teaches that the method includes contacting the magnesium surface with a solution containing 1-10 g/l potassium permanganate, as recited in instant claim 15 (paragraph [0009]) at a temperature that encompasses the instantly claimed temperatures in instant claim 13 (paragraph [0012]), for a time encompassed by the time claimed in instant claim 14 (paragraph [0012] and [0018]) wherein the conversion coated magnesium article is subsequently treated with a polymer coating, as recited in claims 3 and 17 (paragraph [0014]).

JP '073 fails to meet all the limitations of the instant claims in that JP '073 does not explicitly teach the oxide content of the resultant coating, the pH or the inclusion of vanadate, molybdate, or tungstate.

Pacz teaches a process of coating of magnesium (page 1, col 2, line 4) with a solution that contains molybdate or tungstate as a sodium, potassium, or ammonium salt, in a concentration that is encompassed by instant claim 16 (page 1, col 1, lines 31-37 and col 2, lines 94-102), wherein the process is inexpensive, rapid, technically convenient and safe for casual factory workers and produces a dense adherent protective coating (page 1, col 1, lines 17-25) that is

Art Unit: 1742

attractive and is a desirable base for subsequent coatings, such as paint (page 2, col 1, lines 54-64). Pacz further teaches that the molybdate solution may also include additional reagents, such as energizing or activating reagents (page 2, col 2, lines 90-101).

With respect to the addition of molybdate, or tungstate, one of ordinary skill in the art would have found the invention to be obvious because one of ordinary skill in the art would have been motivated to add molybdate or tungstate to the solution of JP '073 in order to provide the desirable result of dense adherent protective conversion coatings (Pacz: page 1, col 1, lines 17-25) that are attractive and are a desirable base for subsequent coatings, such as paint (Pacz: page 2, col 1, lines 54-64), wherein the inclusion would provide the process with the desirable properties, while being inexpensive, rapid, technically convenient and safe for casual factory workers (Pacz: page 1, col 1, lines 17-25).

With respect to the oxide content of the resultant coating (instant claim 1), one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the process steps taught by the reference are the same as the process steps recited in the claims (i.e. contacting the surface of magnesium with a solution including permanganate and molybdate or tungstate (JP '073: abstract and Pacz: page 1, col 2, lines 90-101) and therefore one of ordinary skill in the art would expect that the products resulting from the process taught by the references would be the same as the product resulting from applicant's claimed process, including the product's oxide content.

"Where the claimed and prior art products are identical or substantially identical in structure or composition or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess

Art Unit: 1742

the characteristics of the claimed product. In re Best 195 USPQ 430, 433 (CCPA 1977).” see MPEP 2112.01. [emphasis added by examiner]

With respect to the pH concentration of the treatment solution (instant claim 12), one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the composition taught by the references are substantially identical to the composition recited in the claims and therefore one of ordinary skill in the art would expect that the product taught by the references would be the same as applicant’s claimed product, including the product’s pH, see MPEP 2112.01.

With respect to the process steps recited in claim 2, it is noted that the process steps do not distinguish over any process utilized to create the claimed conversion coating because the claim uses the language “prepared by” (claim 2, line 3). The use of the phrase “prepared by” in the article claim indicates a product-by-process claim. It is well settled that a product-by-process claim defines a product, and that when the prior art discloses a product substantially the same as that being claimed, differing only in the manner by which it is made, the burden falls upon the applicant to show that any process steps associated therewith results in a product materially different from that disclosed in the prior art. See In re Thorpe, (227 USPQ 964), In re Brown, (173 USPQ 685), In re Fessman, (180 USPQ 524) and MPEP 2113. In this case, the article taught by JP ‘073 in view of Pacz is substantially the same as the product instantly claimed.

Japanese Patent JP 08-035073 Takatani Matsufumi in view of Pacz 1,723,067

NOTE: All references to the JP ‘073 reference are to the abstract or the English Language translation provided, unless otherwise indicated.

6. Claims 3-6 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent JP 08-035073 Takatani Matsufumi (JP ‘073) in view of Pacz 1,723,067 (Pacz) in further view of Yamaya et al. (Yamaya 5,814,703).

Art Unit: 1742

JP '073 teaches and is applied as set forth in paragraph 5, above.

JP '073 fails to meet all the limitations of the instant claims in that JP '073 does not explicitly teach the alkoxysilane compounds instantly claimed.

Pacz teaches and is applied as set forth above in paragraph 5, above.

Yamaya et al. teaches a organic and silicon coating system (abstract), including an acrylic coating system (col 3, lines 23-27), wherein the system includes the specific polymerized or crosslinked alkoxysilane compounds instantly claimed (col 3, line 63 to col 7, line 18). Yamaya teaches that the coating system may include a dye (col 8, lines 21-24). Yamaya also teaches that the coating system has high hardness, increased flexibility, stain resistance, chemical resistance and strong adherence to the substrate (col 2, line 61 to col 3, line 16).

Although JP '073 does not specifically recite the ingredients of the "acrylic resin system" taught in paragraph [0014], one of ordinary skill in the art would have found the claimed ingredients obvious because acrylic resin systems including the organic and silicon containing components instantly claimed are known in the art, as taught in Yamaya, and one of ordinary skill in the art would be motivated to provide the particular ingredients taught in Yamaya because the system is desirable to provide outer coatings that have high hardness, increased flexibility, stain resistance, chemical resistance and strong adherence to the substrate, as taught in Yamaya (col 2, line 61 to col 3, line 16).

Allowable Subject Matter

7. Claims 7-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

a. A primary reason for the allowance of claims 7-10, under the above conditions, is that the prior art fails to teach or suggest, either alone or in combination, the instantly claimed article further coated with the claimed polymer coating comprising the claimed alkoxysilane complex wherein the polymer coating further comprises a titanium complex, as instantly claimed.

Response to Arguments

8. Applicant's arguments filed September 23, 2003 have been fully considered but they are not persuasive. Claims 1-19 remain pending in this application. In view of applicant's amendment, the rejection has been maintained and amended to address the newly presented limitations.

9. With respect to applicant's argument that Fruchtnicht fails to teach an electroless process, the examiner does not find the argument persuasive because the term "electroless" has not been given patentable weight (see discussion of product-by-process in the rejection, above).

10. With respect to applicant's argument that there is no motivation to combine JP '073 with Pacz, the examiner does not find the argument persuasive. The examiner maintains that the proposed combination is proper for the reasons set forth in the previous Office Action:

With respect to the addition of molybdate, or tungstate, one of ordinary skill in the art would have found the invention to be obvious because one of ordinary skill in the art

Art Unit: 1742

would have been motivated to add molybdate or tungstate to the solution of JP '073 in order to provide the desirable result of dense adherent protective conversion coatings (Pacz: page 1, col 1, lines 17-25) that are attractive and are a desirable base for subsequent coatings, such as paint (Pacz: page 2, col 1, lines 54-64), wherein the inclusion would provide the process with the desirable properties, while being inexpensive, rapid, technically convenient and safe for casual factory workers (Pacz: page 1, col 1, lines 17-25). [emphasis added]

The examiner maintains that one of ordinary skill in the art would have been motivated to combine the references because Pacz teaches that providing the particular coating additives provide a desirable result, wherein the suggestion is taught in Pacz (page 1, col 1, lines 17-25; and page 2, col 1, lines 54-64). Furthermore, the Pacz reference suggests that additional reagents, such as reagents present in JP '073 may be added to the composition (Pacz: page 2, col 2, lines 90-101). Therefore, the argument is not found persuasive.

11. With respect to the amendment changing "obtainable by" to "produced by", the claims have been rejected for the reasons set forth above in paragraphs 4, 5 and 6. In particular, the new reference Yamaya has been applied to the alkoxysilane limitations now present in the claims (see paragraph 6, above).

12. In view of all of the above, the arguments have not been found persuasive.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

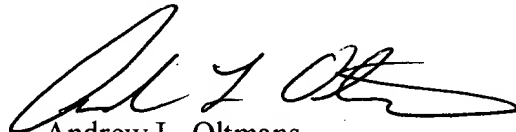
Art Unit: 1742

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L Oltmans whose telephone number is 703-308-2594. The examiner can normally be reached from 7:00 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 703-308-1146. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Andrew L. Oltmans
Patent Examiner
Art Unit 1742

alo
December 5, 2003